2000753

The Boeing Company
Rocketdyne Propulsion & Power
6633 Canoga Avenue
P.O. Box 7922
Canoga Park, CA 91309-7922

CERTIFIED MAIL

February 17, 2004
In reply refer to 2004RC0590

BOEING

Gerard Abrams
Calif. Environmental Protection Agency
Department of Toxic Substances Control
Region 1
Facility Permitting Branch
8800 Cal Center Drive
Sacramento CA 95826-3200

Subject: Santa Susana Field Laboratory Corrective Action Program Quarterly Progress Reports for EPA ID Numbers CAD093365435 (Rocketdyne), CA1800090010 (NASA) and CAD000629972 (DOE)

Dear Mr. Abrams:

The Boeing Company, Rocketdyne (Rocketdyne) has enclosed the following progress reports as required by Hazardous Waste Facility Post-Closure Permits for Rocketdyne and NASA at the Santa Susana Field Laboratory (SSFL). In addition, Rocketdyne has included a progress report for the DOE Corrective Action sites in Area IV. Rocketdyne has submitted the reports in the format as it appears in Attachment I of the Rocketdyne and NASA permits. This reporting period is from November 16, 2003 through February 13, 2004.

Should you have any comments, please do not hesitate to let me know. I can be reached at (818) 586-5695.

Sincerely,

Art Lenox
Environmental Remediation

AJL:dr
Enclosures

(SHEA-099210)

BOEING

cc:

A. Elliott/NASA	(with enclosures)
D. Hambrick/MWH	(with enclosures)
L. Rainey/DTSC	(with enclosures)
S. Baxter/DTSC	(with enclosures)
P. Batarseh/DTSC	(without enclosures)
P. Bailey/DTSC	(with enclosures)
K. Baker/DTSC	(without enclosures)
M. Lopez/DOE/OAK	(with enclosures)
J. Beach/EPA	(with enclosures)
J. Pappas	(without enclosures)
R. Marshall/CSUN, Oviatt Library	(with enclosures)
D. Redfield/Simi Valley Library	(with enclosures)
Ms. Lynn Light, /LA Public Library Platt Branch	(with enclosures)

Santa Susana Field Laboratory
RFI and CMS Projects
Quarterly Progress Report
EPA ID No.CAD 093365435 (Rocketdyne)

Rocketdyne Project Manager:	Art Lenox
Contractor Project Manager:	Dixie Hambrick
Report Period:	November 16, 2003 – February 15, 2004

1. PROGRESS MADE THIS REPORT PERIOD

Soil, soil leachate, surficial bedrock, and surface water sampling was performed during this period for the RCRA Facility Investigation (RFI). The majority of this field effort was for perchlorate characterization at the Happy Valley and Building 359 RFI sites (Area I Areas of Concern [AOCs]) (Table 1). This work was performed in support of, and during, the Happy Valley/Building 359 interim measures (HVIM). Limited soil sampling was also performed at the Component Test Laboratory V (CTL-V) RFI site (Area I AOC). MWH collected a total of 438 soil matrix, soil leachate, bedrock, and surface water samples at 2 Rocketdyne sites during this reporting period (Table 1). The majority of the soil and water sample analysis was performed by the California-certified laboratories Del Mar Analytical, located in Irvine, and at Ceimic Corporation, located in Rhode Island. Because of the high sample volume and need for rapid turn around times, other laboratories used this period included the California-certified Severn Trent Laboratories (STL) located in Sacramento, Denver, and Savanna. To date, approximately 1186 soil vapor (1290 analyses) and 4620 soil matrix/bedrock/surface water samples (8712 analyses) have been collected from Rocketdyne locations during the RFI program (Table 2).

Near-surface groundwater sampling was not conducted this period (Table 1). To date, approximately 201 groundwater samples (313 analyses) have been collected from Rocketdyne locations during the RFI program (Table 2). The Near-Surface Groundwater Characterization Report was completed and submitted to DTSC in November 2003. The report presents a comprehensive description of the SSFL near-surface groundwater investigation results.

HVIM field work for excavation activities were completed this period, and the area backfilled and revegetated. A HVIM Report for this phase of the project is being prepared. In December 2003, a work plan was prepared and submitted to DTSC regarding the biotreatment of perchlorate-impacted soils from Happy Valley and Building 359 sites. A meeting was held with DTSC and the Los Angeles Regional Water Quality Board (RWQCB) on January 29, 2003 to discuss this document, and additional information regarding the implementation of the biotreatment phase is being prepared for agency review.

The Area I Landfill (SWMU 4.2) investigation was completed in early November and trenches were backfilled in December 2003 after review of sample results and discussion with DTSC.

Work continued this period on the comprehensive evaluation of perchlorate at and near the SSFL. Perchlorate sampling results from the northern portion of the SSFL and leading offsite to well OS-9 were published in the Northern Drainage Sampling Technical Memorandum, submitted to DTSC in November 2003. An update to the February 2003 Perchlorate Source Evaluation and Technical Report was also completed to summarize new sampling information between January and October 2003. The Perchlorate Report Update was submitted to DTSC in November 2003.

Preparation of draft RFI site reports continued this period. The draft Instrument and Equipment Laboratories (IEL) (SWMUs 4.3, 4.4, and AOCs) RFI site report was completed and submitted to DTSC in December. Preparation of the draft CTL-V RFI site report (Area I AOC) is ongoing. Work also began on the comprehensive RFI Program report, and RFI site reports for several Rocketdyne sites in Area IV.

Based on meetings and discussions with DTSC, the Standardized Risk Assessment Methodology (SRAM) Work Plan, Revision 1 for the Surficial Media Operable Unit, was revised. Meetings with DTSC are continuing to identify required changes to this document prior to submitting a final work plan.

Validation of recent soil and water samples and conducting a program quality assurance (QA) review of soil sampling data are ongoing.

DTSC, Rocketdyne, and MWH met several times this period to discuss the HVIM, RFI reports and groundwater investigations, risk assessment methodology, and DTSC Hazardous Materials Laboratory (HML) data validation of the RFI samples.

2. SUMMARY OF FINDINGS

Perchlorate was detected in soil leachate, surficial bedrock, and/or surface water samples collected at the Happy Valley and Building 359 RFI sites (Area I AOCs). These areas have been previously identified as known perchlorate use sites at the SSFL. Review of the laboratory data is continuing.

Review of Area I Landfill RFI site soil sample data, collected during October/November 2003, indicate localized concentrations of elevated metals and polychlorinated biphenyls (PCBs). Low concentrations of perchlorate (up to about 30 micrograms per kilogram)

were detected in soil leachate samples collected near the Area I road in a limited portion of the landfill.

Review of soil sampling results near ground-mounted transformers, collected during September 2003, indicate that PCBs were detected at 6 of the 24 transformer locations sampled. These included transformers at the following Rocketdyne RFI sites: IEL (SWMUs 4.3, 4.4, and AOCs), Building 359 (Area I AOC), Laser Engineering Test Facility (LETF) (SWMU 12), CTL-III (SWMU 4.7), and Environmental Effects Laboratory (EEL) (SWMU 6.9).

3/4 SUMMARY OF PROBLEMS/ACTIONS TAKEN

None.

5. PROJECT ACTIVITY NEXT PERIOD

Boeing will be involved with the following RFI activities during the next period:

- Implement biotreatment activities for the HVIM at the Building 359 RFI site (pending permit and work plan approvals)
- Complete and submit the draft HVIM Excavation Report
- Complete and submit the draft CTL-V RFI Site Report
- Complete and submit the draft RFI Program Report
- Continue preparation of the draft Area IV RFI Site Reports
- Complete and submit the final Surficial OU SRAM, Revision 1
- Complete transformer sampling at Rocketdyne RFI sites
- Continue data validation for samples collected at Rocketdyne sites

6. PERSONNEL CHANGES

None.

7. SUMMARY OF CONTACTS

None.

8. TREATMENT SYSTEM EFFECTIVENESS

No soil remediation treatment systems are in place or operational at this time. Next period, biotreatment of perchlorate-impacted soils will begin after permits are obtained for the HVIM.

9. DATA REPORTS SUBMITTED

Perchlorate Source Evaluation and Technical Report Update, January through September 2003, Santa Susana Field Laboratory, Ventura County, California. Volumes I and II. November 2003.

Northern Drainage Perchlorate Sampling Results Technical Memorandum, Santa Susana Field Laboratory, Ventura County, California. November 2003.

Near-Surface Groundwater Characterization Report, Santa Susana Field Laboratory, Ventura County, California. Volumes I and II. November 2003.

Instrument and Equipment Laboratories (IEL) (SWMU 4.3, 4.4, and AOCs), RCRA Facility Investigation Report, Santa Susana Field Laboratory, Ventura County, California. December 2003.

Work Plan for the Biotreatment of Perchlorate in Soil and Sediment, Happy Valley Interim Measures Project, Santa Susana Field Laboratory, Ventura County, California. December 2003

Table 1
Rocketdyne Sampling Summary
November 16, 2003 - February 15, 2004

UNIT	Facility	MATRIX	Total Samples	Total Analyses	PCBs 8080/8082	SVOA, 8270CSIM	TPH, 8015	Dioxin, 8290	Metals 6010B/7000	Ordnance, 8330	VOA, 8260	PERCHLORATE	Arsenic
Area I AOC	Happy Valley	R	8	8	0	0	0	0	0	0	0	8	0
Area I AOC	Happy Valley	S	55	116	0	16	5	10	34	16	8	10	17
Area I AOC	Happy Valley	W	370	370	0	0	0	0	0	0	0	370	0
Area I AOC	CTL-V	S	5	5	5	0	0	0	0	0	0	0	0
Total Surficial bedrock		**R**	**8**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**
Total Soil		**S**	**60**	**121**	**5**	**16**	**5**	**10**	**34**	**16**	**8**	**10**	**17**
Total Water		**W**	**370**	**370**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**370**	**0**
TOTAL			**438**	**499**	**5**	**16**	**5**	**10**	**34**	**16**	**8**	**388**	**17**
S = Soil	W = includes surface water and leachates												
R = Surficial Bedrock													
Note : does not include samples on hold.													

Table 2
RFI Sampling Summary
November 15, 2003 - February 15, 2004

RFI Soil Matrix Sampling Analysis Summary

OWNER/OPERATOR		Total Samples	Total Analyses	VOA, 8260	TPH, 8015	VOA, 8021A	SVOA, 8270SIM	SVOA, 8270	Metals, 6010/7000	Mercury 7471A	Methyl Mercury	Silver 7761	Lead	Beryllium	Hex Cr 7196	Fluoride 340.2	ANIONS, 300	PH, 9040/9045	PCBs 8080/8082	PCBs 1668	Perm, ASTMD19	Perchlorate, 300M/314.0	Tributyl tin	Dioxin, 8290	Dioxin, 1613B	Hydrazine	Ordnance, 8330	SPLP, 1312	Asbestos	LIPIDS	TOC	Arsenic	PAH, 8310	1 4-Dioxane, 8260SIM	Gross Alpha/Beta, 900 0	Gamma Spec, 901 1	Deuterium	Oxygen 18	TDS	TSS	PAH 4294
Rocketdyne		4620	8712	267	1211	646	784	92	1299	117	3	10	24	15	104	175	217	850	223	18	193	1969	2	137	10	14	187	78	0	2	8	66	2	11	5	5	19	19	7	18	5
NASA		915	1308	89	376	153	84	18	142	75	2	20	1	0	10	10	19	67	58	8	16	29	0	50	11	0	1	5	5	0	3	0	1	13	7	7	5	5	8	0	10
DOE		360	1782	69	742	50	162	13	206	3	0	1	0	0	2	17	9	174	121	1	0	88	0	52	0	0	4	6	50	0	0	0	0	0	2	2	2	2	1	0	1
Total		5795	11802	425	2329	849	1030	123	1649	195	5	31	25	15	116	202	245	1091	402	27	209	1986	2	239	21	14	192	89	55	2	11	66	3	24	14	14	26	26	16	18	16

Notes
Soil, water only - no vapor — No Eco Samples
No Task 203 samples (LUFT) — No background samples
No Bell Canyon samples — No samples on hold
Includes all Ogden/MWH samples at RFI sites - June 96 thru present

RFI Soil Vapor Sampling Analysis Summary

OWNER/OPERATOR	Total Active SV Samples	Total Dilutions	Total Active SV Analyses	Total PSV Samp/Anal		Total SV Samples	Total SV Analyses
Rocketdyne	1178	102	1282	8		1195	1290
NASA	519	19	535	14		524	549
DOE	136	0	136	0		136	136
Total	1824	121	1953	22		1845	1975

Notes
Includes HGS, CAL analyses (no TEG) — Includes Gore analyses, no dilutions required
Includes all Ogden/MWH samples at RFI sites - June 96 thru present
Four Active SV analyses performed by Method TO-14A, all remaining analyses performed by Method 8260, modified for vapor

RFI Biotic Sampling Analysis Summary

OWNER/OPERATOR		Total Samples	Total Analyses	SVOC, 8270CSIM	Metals, 6010B/7471A	PCBs, 1668	Dioxin, 1613B	LIPIDS
Rocketdyne		20	42	8	0	12	2	20
NASA		25	67	12	24	13	13	25
DOE		0	0	0	0	0	0	0
Total		45	129	20	24	25	15	45

Notes
Includes all Ogden/MWH samples at RFI sites - June 96 thru present

RFI Near-Surface Groundwater Sampling Analysis Summary

OWNER/OPERATOR		Total Samples	Total Analyses	VOA, 8260	TPH, 8015	SVOA, 8270SIM	Metals, 6010/7000	Arsenic	PCBs, 8082	Perchlorate, 300M	1-4 Dioxane, 8260SIM	Dioxin, 8290	Gross Alpha/Beta, 900 0	Gamma Spec, 901 1	Trithium, 906 0	Nitrate	TDS	Ordnance, 8330	Hex Cr, 7196
Rocketdyne		201	313	158	18	19	18	3	6	45	25	6	7	1	1	0	0	5	1
NASA		81	131	72	18	10	11	0	0	6	9	2	1	0	0	1	1	0	0
DOE		48	152	32	17	13	15	0	3	6	0	0	22	22	22	0	0	0	0
Total		330	596	262	53	42	44	3	9	57	34	8	30	23	23	1	1	5	1

Notes
Includes all Ogden/MWH samples at RFI sites - June 96 thru present
Gross Alpha/Beta analyses from 2001 also included on table.

Note: QC of database ongoing; this table reflects corrections made to date and may slightly differ from previous publications.

Santa Susana Field Laboratory
RFI and CMS Projects
Quarterly Progress Report
EPA ID No. CAD000629972 (Department of Energy)

Rocketdyne Project Manager:	Art Lenox
Contractor Project Manager:	Dixie Hambrick
Report Period:	November 16, 2003 – February 15, 2004

1. PROGRESS MADE THIS REPORT PERIOD

Sampling was not performed during this period for the RCRA Facility Investigation (RFI) at DOE sites. To date, approximately 136 soil vapor (136 analyses) and 360 soil matrix/bedrock/surface water samples (1782 analyses) have been collected from DOE locations during the RFI program (Table 2). (Table 1, a summary of samples collected this period, is not included for this report.)

Near-surface groundwater sampling was not conducted this period. To date, approximately 48 groundwater samples (152 analyses) have been collected from DOE locations during the RFI program (Table 2). The Near-Surface Groundwater Characterization Report was completed and submitted to DTSC in November 2003. The report presents a comprehensive description of the SSFL near-surface groundwater investigation results.

Based on meetings and discussions with DTSC, the Standardized Risk Assessment Methodology (SRAM) Work Plan, Revision 1 for the Surficial Media Operable Unit, was revised. Meetings with DTSC are continuing to identify required changes to this document prior to submitting a final work plan.

DTSC comments regarding the Old Conservation Yard (SWMU 7.4) RFI Site Report were received this period; discussions regarding these comments are ongoing.

Preparation of draft RFI site reports continued this period. Preparation of the draft Former Sodium Disposal Facility (FSDF) (SWMU 7.3) RFI report continued. Work began on the draft Building 56 Landfill (SWMU 7.1) and the Hazardous Materials Storage Area (HMSA) (Area IV AOC) RFI Site Reports, and the comprehensive RFI Program report.

Validation of recent soil and water samples and conducting a program quality assurance (QA) review of soil sampling data are ongoing.

DTSC, Rocketdyne, and MWH met several times this period to discuss the RFI reports and groundwater investigations, risk assessment methodology, and DTSC Hazardous Materials Laboratory (HML) data validation of the RFI samples.

Infiltration monitoring continued at FSDF (SWMU 7.3) this period.

2. SUMMARY OF FINDINGS

Soil samples collected near ground-mounted transformers at DOE RFI sites in Area IV during September 2003 did not contain detectable polychlorinated biphenyls (a total of 24 transformer locations were sampled in this event throughout the SSFL).

3/4 SUMMARY OF PROBLEMS/ACTIONS TAKEN

None.

5. PROJECT ACTIVITY NEXT PERIOD

Boeing will be involved with the following RFI activities during the next period:

- Complete the draft FSDF, HMSA, and Building 56 Landfill RFI Site Reports
- Complete and submit the draft RFI Program Report
- Complete and submit the final Surficial OU SRAM, Revision 1
- Conduct sampling at the Building 020 RFI site (Area IV AOC)
- Complete transformer sampling at DOE RFI sites
- Continue data validation for samples collected at DOE sites
- Continue Infiltration Monitoring at FSDF

6. PERSONNEL CHANGES

None.

7. SUMMARY OF CONTACTS

None.

8. TREATMENT SYSTEM EFFECTIVENESS

No soil remediation treatment systems are in place or operational at this time.

9. DATA REPORTS SUBMITTED

Near-Surface Groundwater Characterization Report, Santa Susana Field Laboratory, Ventura County, California. Volumes I and II. November 2003.

Table 1
DOE Sampling Summary
November 16, 2003 - February 15, 2004

UNIT	Facility	MATRIX	Total Samples	Total Analyses	PCBs, 8080/8082	SVOA, 8270SIM	TPH, 8015	8015, Soil Vapor	Metals 6010B/7000	VOA, 8260	Perchlorate	PH, 9040/9045	Asbestos
Non RFI Site	Transformer Samples	S	0	0	0	0	0	0	0	0	0	0	0
Area IV AOC	SNAP	S	0	0	0	0	0	0	0	0	0	0	0
SWMU 7.1	Bldg 56 Landfill	S	0	0	0	0	0	0	0	0	0	0	0
SWMU 7.1	Bldg 56 Landfill	V	0	0	0	0	0	0	0	0	0	0	0
SWMU 7.1	Bldg 56 Landfill	W	0	0	0	0	0	0	0	0	0	0	0
SWMU 7.4	Old Conservation	S	0	0	0	0	0	0	0	0	0	0	0
Total Soil		**S**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Vapor		**V**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Water		**W**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
S = Soil	W = includes surface water and leachates												
V = Vapor													
Note - includes QA samples (water, soil, vapor); does not include samples on hold.													

Table 2
RFI Sampling Summary
November 19, 2003 - February 16, 2004

RFI Soil Matrix Sampling Analysis Summary

OWNER/OPERATOR		Total Samples	Total Analyses	VOA, 8260	TPH, 8015	VOA, 8021A	SVOA, 8270SIM	SVOA, 8270	Metals, 6010/7000	Mercury, 7471A	Methyl Mercury	Silver, 7761	Lead	Beryllium	Hex Cr, 7196	Fluoride, 340.2	ANIONS, 300	PH, 9040/9045	PCBs, 8080/8082	PCBs, 1668	Perm, ASTMD18	Perchlorate, 300M/314.0	Tributyl tin	Dioxin, 8290	Dioxin, 1613B	Hydrazine	Ordnance, 8330	SPLP, 1312	Asbestos	LIPIDS	TOC	Arsenic	PAH, 8310	1,4-Dioxane, 8260SIM	Gross Alpha/Beta, 900.0	Gamma Spec, 901.1	Deuterium	Oxygen 18	TDS	TSS	PAH, 429M
Rocketdyne		4620	8712	267	1211	645	784	92	1299	117	3	10	24	15	104	175	217	860	223	18	193	1969	2	137	10	14	187	79	0	2	8	66	2	11	5	5	19	19	7	18	5
NASA		815	1308	89	376	153	84	18	142	75	2	20	1	0	10	10	19	67	58	8	16	29	0	50	11	0	1	5	5	0	3	0	1	13	7	7	5	5	8	0	10
DOE		360	1782	69	742	50	162	13	206	3	0	1	0	0	2	17	9	174	121	1	0	88	0	52	0	0	4	6	50	0	0	0	0	0	2	2	2	2	1	0	1
Total		5796	11802	425	2329	849	1030	123	1649	195	5	31	25	15	116	202	245	1091	402	27	209	1986	2	239	21	14	192	89	55	2	11	66	3	24	14	14	26	26	16	18	16

Notes:
Soil, water only - no vapor
No Eco Samples
No Task 203 samples (LUFT)
No background samples
No Bell Canyon samples
No samples on hold
Includes all Ogden/MWH samples at RFI sites - June 96 thru present

RFI Soil Vapor Sampling Analysis Summary

OWNER/OPERATOR	Total Active SV Samples	Total Dilutions	Total Active SV Analyses	Total PSV Samp/Anal		Total SV Samples	Total SV Analyses
Rocketdyne	1178	102	1282	8		1186	1290
NASA	510	19	535	14		524	549
DOE	136	0	136	0		136	136
Total	1824	121	1953	22		1846	1975

Notes:
Includes HGS, CAL analyses (no TEG)
Includes Gore analyses, no dilutions required
Includes all Ogden/MWH samples at RFI sites - June 96 thru present
Four Active SV analyses performed by Method TO-14A, all remaining analyses performed by Method 8260, modified for vapor

RFI Biota Sampling Analysis Summary

OWNER/OPERATOR		Total Samples	Total Analyses	SVOC, 8270CSIM	Metals, 6010B/7471A	PCBs, 1668	Dioxin, 1613B	LIPIDS
Rocketdyne		20	42	8	0	12	2	20
NASA		25	87	12	24	13	13	25
DOE		0	0	0	0	0	0	0
Total		45	129	20	24	25	15	45

Notes:
Includes all Ogden/MWH samples at RFI sites - June 96 thru present

RFI Near-Surface Groundwater Sampling Analysis Summary

OWNER/OPERATOR		Total Samples	Total Analyses	VOA, 8260	TPH, 8015	SVOA, 8270SIM	Metals, 6010/7000	Arsenic	PCBs, 8082	Perchlorate, 300M	1-4 Dioxane, 8260SIM	Dioxin, 8290	Gross Alpha/Beta, 900.0	Gamma Spec, 901.1	Tritium, 906.0	Nitrate	TDS	Ordnance, 8330	Hex Cr, 7196
Rocketdyne		201	313	159	18	19	18	3	6	45	25	6	7	1	1	0	0	5	1
NASA		81	131	72	18	10	11	0	0	6	9	2	1	0	0	1	1	0	0
DOE		48	162	32	17	13	15	0	3	6	0	0	22	22	22	0	0	0	0
Total		330	606	262	53	42	44	3	9	57	34	8	30	23	23	1	1	5	1

Notes:
Includes all Ogden/MWH samples at RFI sites - June 96 thru present
Gross Alpha/Beta analyses from 2001 also included on table.

Note: QC of database ongoing; this table reflects corrections made to date and may slightly differ from previous publications.

Santa Susana Field Laboratory
RFI and CMS Projects
Quarterly Progress Report
EPA ID No. CA1800090010 (NASA)

Rocketdyne Project Manager:	Art Lenox
Contractor Project Manager:	Dixie Hambrick
Report Period:	November 16, 2003 – February 15, 2004

1. PROGRESS MADE THIS REPORT PERIOD

Sampling was not performed during this period for the RCRA Facility Investigation (RFI) at NASA sites. To date, approximately 524 soil vapor (549 analyses) and 815 soil matrix/bedrock/surface water samples (1308 analyses) have been collected from NASA locations during the RFI program (Table 2). (Table 1, a summary of samples collected this period, is not included for this report.)

Near-surface groundwater sampling was not conducted this period. To date, approximately 81 groundwater samples (131 analyses) have been collected from NASA locations during the RFI program (Table 2). The Near-Surface Groundwater Characterization Report was completed and submitted to DTSC in November 2003. The report presents a comprehensive description of the SSFL near-surface groundwater investigation results.

Based on meetings and discussions with DTSC, the Standardized Risk Assessment Methodology (SRAM) Work Plan, Revision 1 for the Surficial Media Operable Unit, was revised. Meetings with DTSC are continuing to identify required changes to this document prior to submitting a final work plan.

A portion of the Area II Landfill (SWMU 5.1) investigation was completed in early November and trenches were backfilled in December 2003 after review of sample results and discussion with DTSC.

DTSC comments regarding the Building 203 Drainage Interim Measure Work Plan were received this period; discussions regarding these comments are ongoing. Additional characterization is planned to further define actions in the drainage.

Preparation of draft RFI site reports continued this period. Work began on the draft Alfa/Bravo Fuel Farm (ABFF) (Area II AOC), Delta Test Stand (SWMU 5.23), and R-2 Ponds (SWMU 5.26) RFI Site Reports, and the comprehensive RFI Program report.

Validation of recent soil and water samples and conducting a program quality assurance (QA) review of soil sampling data are ongoing.

DTSC, Rocketdyne, and MWH met several times this period to discuss the Building 203 Interim Measure, RFI reports and groundwater investigations, risk assessment methodology, and DTSC Hazardous Materials Laboratory (HML) data validation of the RFI samples.

2. SUMMARY OF FINDINGS

Review of Area II Landfill RFI site soil sample data, collected during October/November 2003, indicates no elevated concentrations.

Soil samples collected near ground-mounted transformers at NASA RFI sites in Area II during September 2003 did not contain detectable polychlorinated biphenyls (a total of 24 transformer locations were sampled in this event throughout the SSFL).

3/4 SUMMARY OF PROBLEMS/ACTIONS TAKEN

None.

5. PROJECT ACTIVITY NEXT PERIOD

Boeing will be involved with the following RFI activities during the next period:

- Complete the draft ABFF, Delta, and R-2 Ponds RFI Site Reports
- Complete and submit the draft RFI Program Report
- Begin preparation of the remaining NASA RFI Site Reports
- Complete and submit the final Surficial OU SRAM, Revision 1
- Conduct sampling in the Building 203 drainage area
- Complete transformer sampling at NASA RFI sites
- Continue data validation for samples collected at NASA sites
- Complete the investigation at the Area II landfill following the rainy season

6. PERSONNEL CHANGES

None.

7. SUMMARY OF CONTACTS

None.

8. TREATMENT SYSTEM EFFECTIVENESS

No soil remediation treatment systems are in place or operational at this time.

9. DATA REPORTS SUBMITTED

Near-Surface Groundwater Characterization Report, Santa Susana Field Laboratory, Ventura County, California. Volumes I and II. November 2003.

Table 1
NASA Sampling Summary
November 16, 2003 - Februrary 15, 2004

UNIT	Facility	MATRIX	Total Samples	Total Analyses	PCBs 8080/8082	TPH, 8015	8015B	Metals 6010B/7000	VOA, 8260	Perchlorate	PH, 9040/9045	Mercury 7471A
Area II AOC	Coca/Delta FF	S	0	0	0	0	0	0	0	0	0	0
SWMU 4.15/AOC	Bowl Area	S	0	0	0	0	0	0	0	0	0	0
SWMU 4.5/6	LOX Area	V	0	0	0	0	0	0	0	0	0	0
SWMU 5.1	Area II Landfill	S	0	0	0	0	0	0	0	0	0	0
SWMU 5.1	Area II Landfill	V	0	0	0	0	0	0	0	0	0	0
SWMU 5.1	Area II Landfill	W	0	0	0	0	0	0	0	0	0	0
SWMU 5.18/19	Coca Area	S	0	0	0	0	0	0	0	0	0	0
SWMU 5.2	ELV (CTL-II)	S	0	0	0	0	0	0	0	0	0	0
SWMU 5.2	ELV (CTL-II)	W	0	0	0	0	0	0	0	0	0	0
SWMU 5.9/10/11	Alfa Area	S	0	0	0	0	0	0	0	0	0	0
Total Water		**W**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Soil		**S**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Vapor		**V**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

S = Soil
W = includes surface water and leachates
V = Vapor
Note - does not include samples on hold.

Table 2
RFI Sampling Summary
November 16, 2003 - February 16, 2004

RFI Soil Matrix Sampling Analysis Summary

OWNER/OPERATOR		Total Samples	Total Analyses	VOA, 8260	TPH, 8015	VOA, 8021A	SVOA, 8270SIM	SVOA, 8270	Metals, 6010/7000	Mercury, 7471A	Methyl Mercury	Silver, 7761	Lead	Beryllium	Hex Cr, 7196	Fluoride, 340.2	AMONIS, 350	PH, 9040/9045	PCBs, 8080/8082	PCBs, 1668	Perm, ASTMD19	Perchlorate, 300M/314.0	Tributyl Sn	Dioxin, 8290	Dioxin, 1613B	Hydrazine	Ordnance, 8330	SPLP, 1312	Asbestos	LIPIDS	TOC	Arsenic	PAH, 8310	1,4-Dioxane, 8260SIM	Gross Alpha/Beta, 900.0	Gamma Spec, 901.1	Deuterium	Oxygen 18	TDS	TSS	PAH, 429M
Rocketdyne		4620	8712	267	1211	846	794	92	1298	117	3	10	24	15	104	175	217	850	223	19	193	1969	2	137	10	14	187	78	0	2	8	66	2	11	5	5	19	19	7	18	5
NASA		815	1308	89	376	153	84	18	142	75	2	20	1	0	10	10	19	67	58	6	16	29	0	60	11	0	1	5	6	0	3	0	1	13	7	7	5	5	8	0	10
DOE		360	1782	69	742	50	162	13	206	3	0	1	0	0	2	17	9	174	121	1	0	88	0	52	0	0	4	6	60	0	0	0	0	0	2	2	2	2	1	0	1
Total		5795	11802	425	2329	849	1030	123	1646	195	5	31	25	15	116	202	245	1091	402	27	209	1986	2	239	21	14	192	89	66	2	11	66	3	24	14	14	26	26	16	18	16

Notes:
Soil, water only - no vapor
No Eco Samples
No Task 203 samples (LUFT)
No background samples
No Bell Canyon samples
No samples on hold
Includes all Ogden/AMWH samples at RFI sites - June 96 thru present

RFI Soil Vapor Sampling Analysis Summary

OWNER/OPERATOR	Total Active SV Samples	Total Dilutions	Total Active SV Analyses	Total PSV Sample/Vial		Total SV Samples	Total SV Analyses
Rocketdyne	1178	102	1282	8		1196	1290
NASA	519	19	538	14		524	543
DOE	136	0	136	0		136	136
Total	1824	121	1963	22		1846	1975

Notes:
Includes HGS, CAL analyses (no TEG)
Includes Gore analyses, no dilutions required
Includes all Ogden/AMWH samples at RFI sites - June 96 thru present
Four Active SV analyses performed by Method TO-14A, all remaining analyses performed by Method 8260, modified for vapor

RFI Biotic Sampling Analysis Summary

OWNER/OPERATOR		Total Samples	Total Analyses	SVOC, 8270/CSM	Metals, 6010B/7471A	PCBs, 1668	Dioxin, 1613B	LIPIDS
Rocketdyne		20	42	8	8	12	2	20
NASA		25	87	12	24	13	13	25
DOE		0	0	0	0	0	0	0
Total		45	129	20	34	25	15	45

Notes:
Includes all Ogden/AMWH samples at RFI sites - June 96 thru present

RFI Near-Surface Groundwater Sampling Analysis Summary

OWNER/OPERATOR		Total Samples	Total Analyses	VOA, 8260	TPH, 8015	SVOA, 8270SIM	Metals, 6010/7000	Arsenic	PCBs, 8082	Perchlorate, 300M	1-4 Dioxane, 8260SIM	Dioxin, 8290	Gross Alpha/Beta, 900.0	Gamma Spec, 901.1	Tritium, 906.0	Nitrate	TDS	Ordnance, 8330	Hex Cr, 7196
Rocketdyne		201	313	158	18	19	18	3	6	46	25	6	7	1	1	0	0	6	1
NASA		81	131	72	18	10	11	0	0	6	6	2	1	0	0	1	1	0	0
DOE		48	152	32	17	13	16	0	3	6	0	0	22	22	22	0	0	0	0
Total		330	596	262	53	42	44	3	9	57	34	8	30	23	23	1	1	6	1

Notes:
Includes all Ogden/AMWH samples at RFI sites - June 96 thru present
Gross Alpha/Beta analyses from 2001 also included on table.

Note: QC of database ongoing; this table reflects corrections made to date and may slightly differ from previous publications.